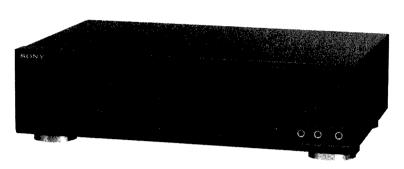
# SERVICE MANUAL



**US Model** Canadian Model **UK Model** TC-RX70ES AEP Model TC-RX70

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol DO are trademarks of Dolby Laboratories Licensing Corporation.

#### **SPECIFICATIONS**

Model Name Using Similar Mechanism	New Mechanism
Tape Transport Mechanism Type	TCM - 200D2

Recording system 4-track 2-channel stereo

Fast winding

Approx. 90 sec. (with C-60 cassette)

AC Bias

Signal-to-noise ratio (NAB, at peak level)

DOLBY NR switch Cassette	OFF	B-TYPE ON	C-TYPE ON
Type IV (Sony METAL-ES)	59 dB	67 dB	74 dB
Type II (Sony UX-S)	58 dB	66 dB	73 dB
Type I (Sony HF-S)	56 dB	64 dB	71 dB

Total harmonic distortion

1.0 % (with Sony METAL-ES cassettes)

Frequency response

DOLBY NR OFF

• With Type IV cassette (Sony

METAL-ES)

RX70ES: 20-20,000 Hz (±3 dB)

RX70: 25-19,000 Hz (±3 dB)

30-15,000 Hz (±3 dB, 0VU recording)

With Type II cassette (Sony UX-S)

25-17,000 Hz (±3 dB)

15-18,000 Hz

• With Type I cassette (Sony HF-S)

25-16,000 Hz (±3 dB)

15 - 17,000 Hz

Wow and flutter Inputs

0.06% WRMS (NAB)

Microphone inputs (phone jacks) Sensitivity 0.25 mV (-70 dB) For a low-impedance microphone

Line inputs (phono jacks)

Sensitivity 77.5 mV (- 20 dB) Input impedance 47k ohms

MICROFILM

Outputs

Line outputs (phono jacks)

Output level of 0.44 V (-5 dB) at a load impedance of 47k ohms Load impedance of over 10k ohms Headphones output (stereo phone jack) Output level of -28 dB at a load

impedance of 8 ohms

General

Power requirements

RX70ES : 120 V AC, 60Hz (US, Canadian models)

240 V AC, 50Hz (UK model)

RX70: 220 V AC, 50/60Hz (AEP model)

Power consumption

23 W

Dimensions

Approx.  $430 \times 123 \times 285$  mm (w/h/d)

 $(17 \times 4^{7}/_{8} \times 11^{1}/_{4} \text{ inches})$ 

including projecting parts and controls Approx. 4.6 kg (10 lbs 3 oz)

Weight Supplied accessory

Connecting cord (2)

Optional accessory

Remote commander RM-J901

Design and specifications are subject to change without notice.

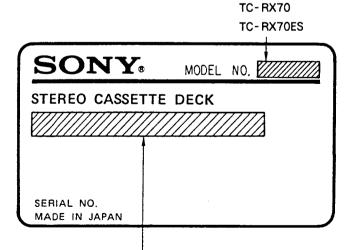


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#### MODEL IDENTIFICATION

Specification Label —



US, Canadian Models: AC 120V 60Hz 23W

#### SAFETY CHECK-OUT

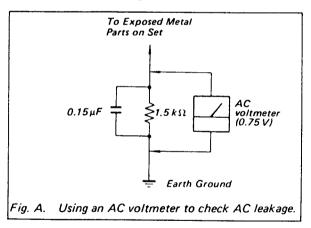
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

#### **LEAKAGE TEST**

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



#### **SAFETY-RELATED COMPONENT WARNING!!**

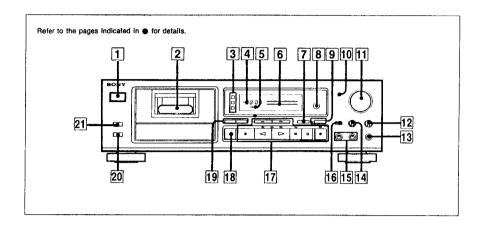
COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK A ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE A SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## **SECTION 1 GENERAL**

### Identification of Front Panel Parts

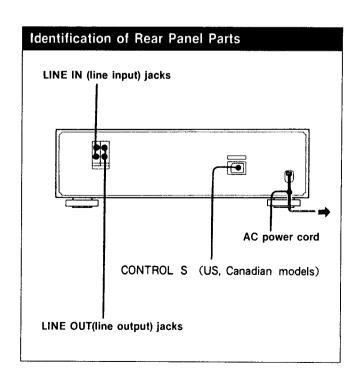


- 17 Tape operation buttons and direction mode, REC and PAUSE indicators

  - (leftward fast winding) button
    (rightward fast winding) button
  - ► (forward play) button
  - ⟨reverse play⟩ button
  - (stop) button
  - II (pause) button
  - REC MUTE (record muting) button
     REC (record) button
- 18 合OPEN/CLOSE button
- 19 COUNTER RESET and MEMORY buttons
- 20 DIRECTION MODE switch
- 21 TIMER switch

- 1 POWER switch
- 2 Cassette holder
- 3 TAPE TYPE indicators
- 4 LINEAR COUNTER
- 5 MEMORY indicator
- 6 PEAK LEVEL METER
- 7 FADER button
- 8 Remote control sensor
  - You can control this cassette deck remotely with: Any remote commander (supplied with a Sony amplifier or receiver) which is marked with the
  - logo and has cassette deck control capability.

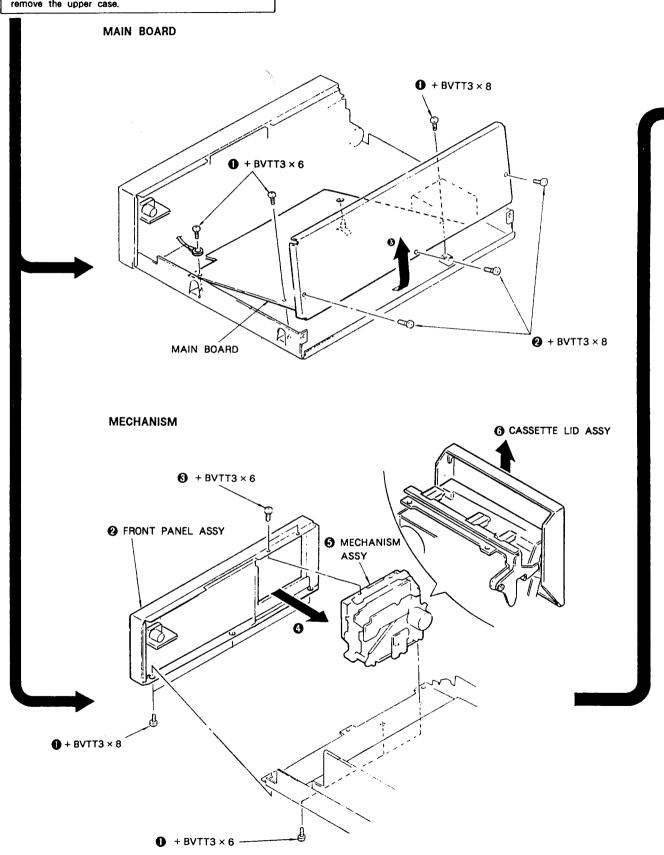
    —An optional Sony remote commander with the
- 9 AUTO REC (automatic recording) LEVEL button and
- 10 DISPLAY MODE button
- 11 REC LEVEL (recording level) control
- 12 BALANCE control
- 13 HEADPHONES jack (stereo phone jack)
- 14 DOLBY NR (Dolby noise reduction) switch
- 15 MICROPHONE jacks (phone jacks)
- 16 MPX FILTER button

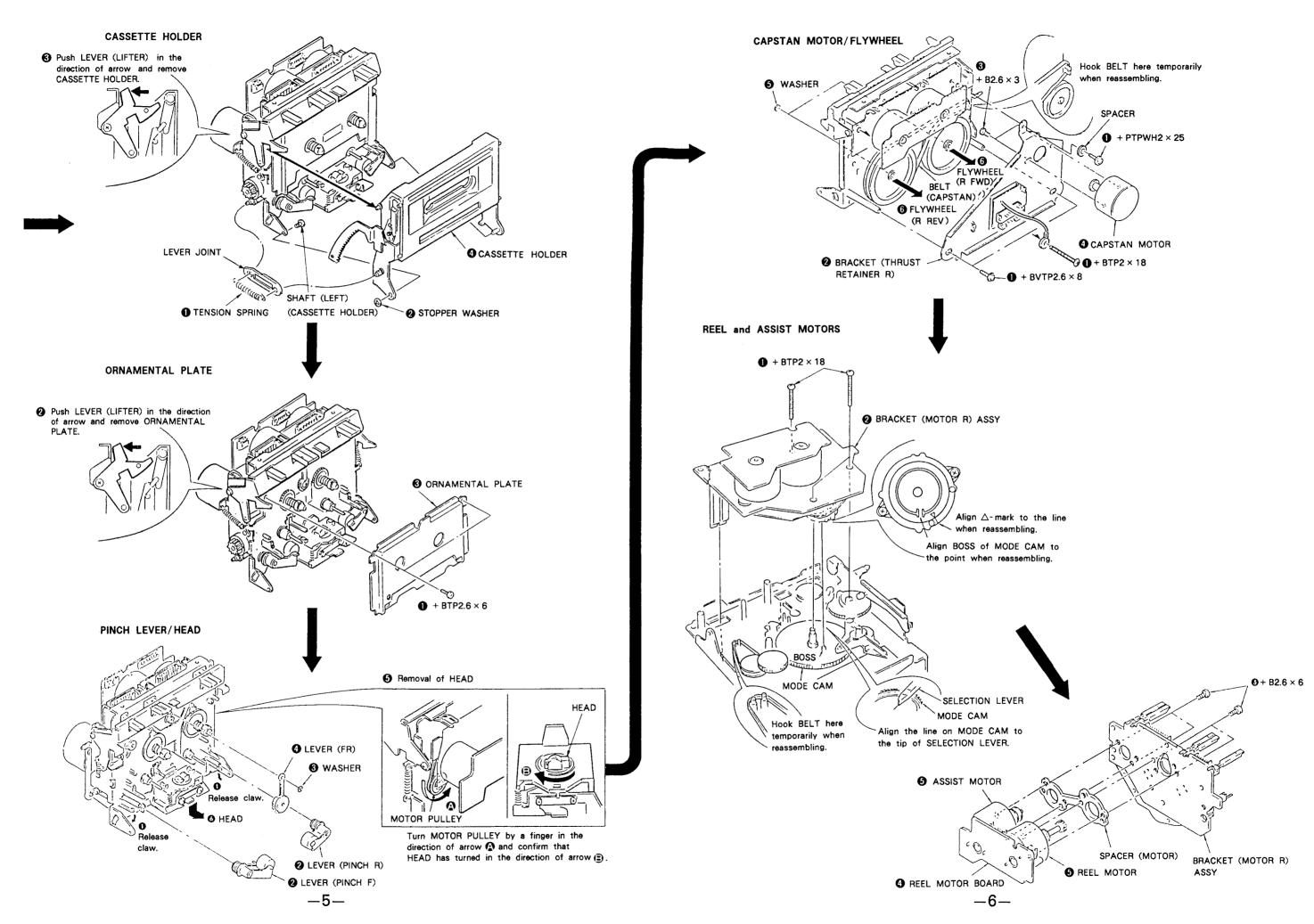


# SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

Unscrew the four case attachment screws  $\mbox{M3} \times \mbox{8}$  and remove the upper case.





# SECTION 3 ADJUSTMENTS

#### 3-1. MECHANICAL ADJUSTMENTS

#### PRECAUTION

 Clean the following parts with a denaturedalcohol-moistened swab:

> record/playback head erase head capstan

pinch roller rubber belts

- idler
- 2. Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments,
- 4. After the adjustments, apply suitable locking compound to the parts adjusted.

#### TORQUE MEASUREMENT

Torque	Torque meter	Meter reading
FWD	CQ-102C	30 - 60g · cm (0.42 - 0.83oz · inch)
FWD	CQ-102C	1 5 (0.014 0.000
Back tention	CQ-102C	$1 - 5g \cdot cm \ (0.014 - 0.069oz \cdot inch)$
REV	CQ-102RB	30 - 60g · cm (0.42 - 0.83oz · inch)
REV	CO 102DD	1 5 (0.014 0.000
Back tention	CQ-102RB	$1 - 5g \cdot cm (0.014 - 0.069oz \cdot inch)$
FF, REW	CQ-201B	70 - 120g · cm (0.98 - 1.66oz · inch)

#### 3-2. ELECTRICAL ADJUSTMENT

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustments about playback should be performed before those about recording.

The adjustments should be performed for both L-CH and R-CH.

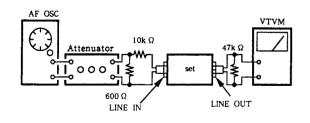
 Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF
DIRECTION switch :

Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

#### -Record Mode-



#### Standard Input Level

input terminal	LINE IN
source impedance	10k Ω
input level	0.25V (-10dB)

#### Standard Output Level

output terminal	LINE OUT
load impedance	47k Ω
output level	0.44V (-5dB)

Test Tape

Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

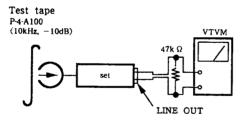
#### Test Mode

The set will get into test mode by shorting the pins of TP801 (TEST) on Main board before turning the power on.

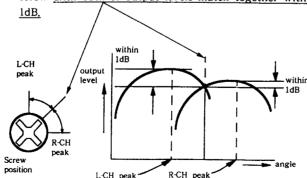
#### Record/Playback Head Azimuth Adjustment

#### Procedure :

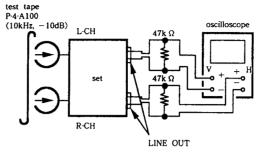
1. Mode: FWD playback

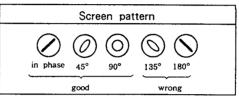


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within



Phase CheckMode: playback





- 4. Set in the REV mode and repeat the step 1-3.
- 5. After the adjustment, lock the screws with locking compound.

Adjustment Location: Record/Playback head



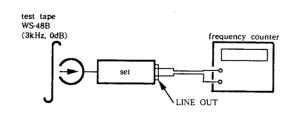
#### Tape Speed Adjustment

Setting:

test pin TP801: short

Procedure :

Mode: playback

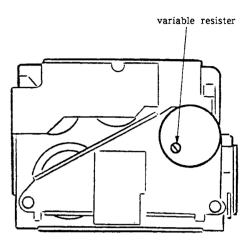


- 1. Set to FWD playback mode.
- 2. Adjust motor rear side (variable resistor) so that the frequency counter reading becomes  $3,000 \pm 15 Hz$ .

Frequency difference between FWD and REV modes should be within 5%.

#### Adjustment Location:

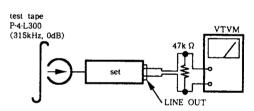
motor rear side



#### Playback Level Adjustment

#### Procedure:

Mode: playback



Adjust RV101 (L-ch) and RV301 (R-ch) so that the reading on VTVM meets the adjustment limits below.

#### Adjustment Limits:

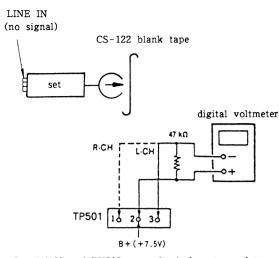
LINE OUT level:  $-5 \pm 0.5$ dB (0.41-0.46V)

Level difference between channels: less than 0.5dB Check that the LINE OUT level does not change even if Playback and Stop operation is repeated several times.

Adjustment Location: Main board

#### Bias Current Adjustment

### Procedure :



- Set RV103 and RV303 to mechanical center and turn the set recording mode.
- 2. Connect digital voltmeter as shown by the following table.
- 3. Adjust the following transformers for the minimum readings on the digital voltmeter.

	Mesurement Point	Adjustment Part	Value
L-ch	① and ②, TP501	T101	not more than 80mV
R-ch	② and ③, TP501	T301	not more than dom'y

Adjustment Location: Main board

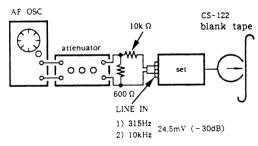
#### Record Bias Adjustment

#### Setting:

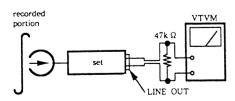
REC LEVEL control: Standard Record (See page 7.) test pin TP801: short

#### Procedure :

1. Mode: record



2. Mode: playback



Playback the signal recorded in step 1.

Confirm that the 10kHz playback output is  $0\pm0.5dB$  relative to the 315Hz output. If necessary, adjust RV103 (L-ch) and RV303 (R-ch) for repeat the steps given above.

Adjustment Location: Main board

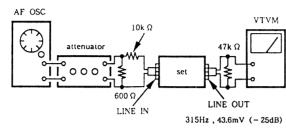
#### Record Level Adjustment

#### Setting:

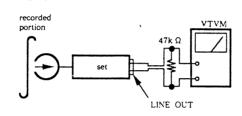
REC LEVEL control: Standard Record (See page 7.) test pin TP801: short

#### Procedure :

1. Mode: record



2. Mode: playback



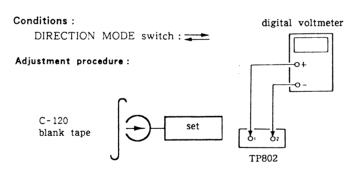
3. Playback the signal recorded in step1.

Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV102 (L-ch) and RV302 (R-ch) repeat the step1-2.

Adjustment Limits:  $-25dB \pm 0.5dB$  (42-46mV)

Adjustment Location: Main board

#### Quick Reverse Sensitivity Adjustment

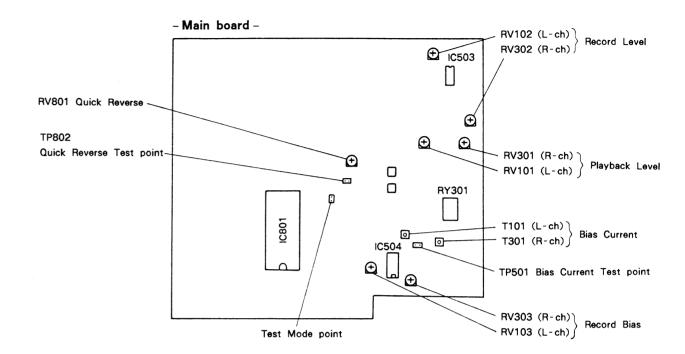


- 1. Connect the digital voltmeter to test point TP802.
- 2. Load C-120 tape cassette and play back the leading portion in FWD mode.
- 3. Adjust the RV801 for  $4.5\pm0.5V$  reading on the digital voltmeter.
- 4. Play back C-120 tape cassette in FWD mode again.
- 5. Confirm that the reading on the digital voltmeter is "L" level at the magnetic portion of the tape.
- 6. Confirm that the tape stop around the tape end (boder of the leading and the magnetic portions).

Adjustment Location: Main board

**\_9**\_

#### Adjustment Parts Location



-10-

# SECTION 4 DIAGRAMS

## 4-1. SEMICONDUCTOR LEAD LAYOUTS

cord Level

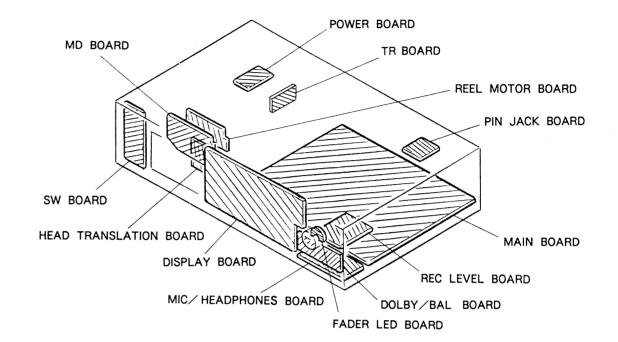
layback Level

Test point

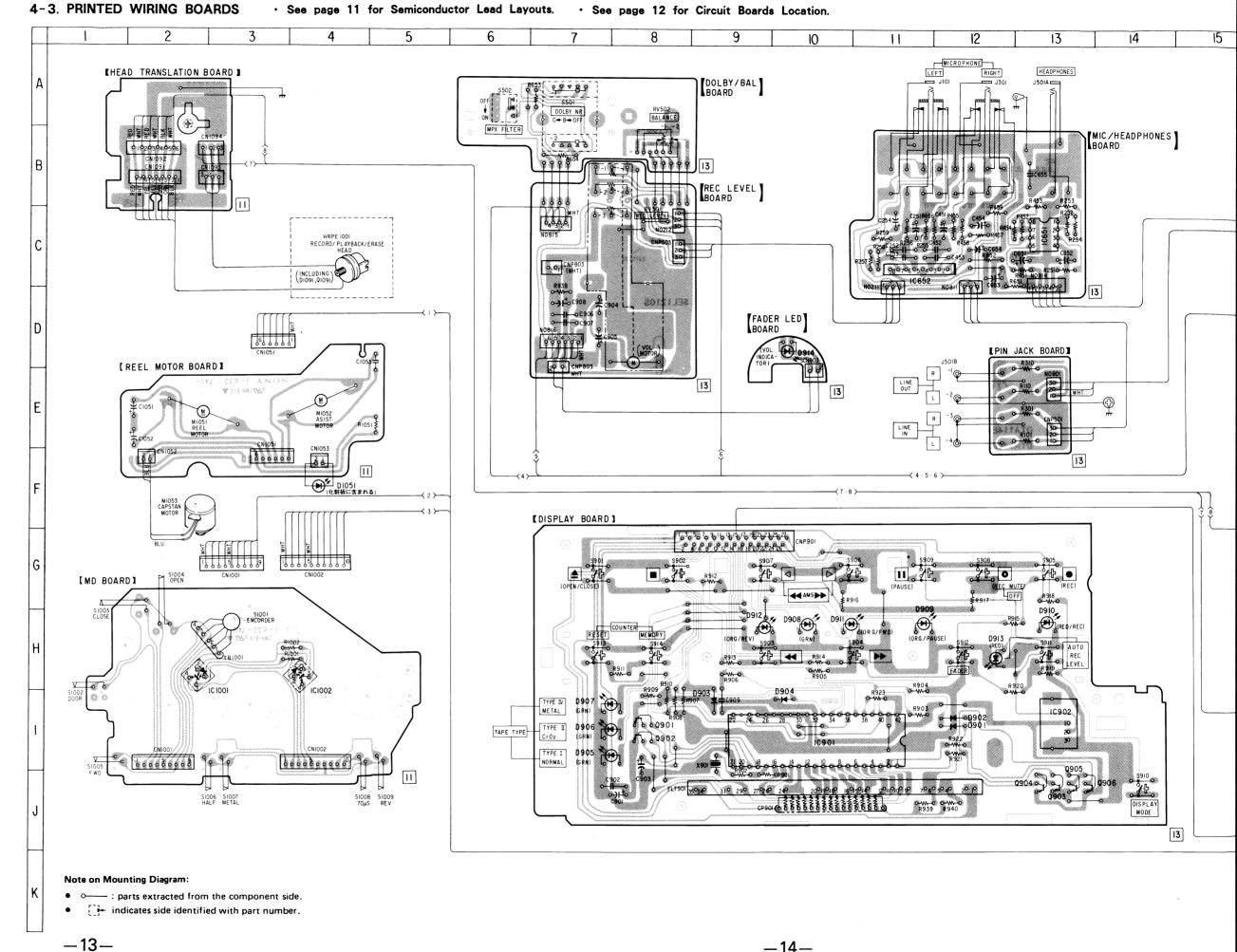
cord Bias

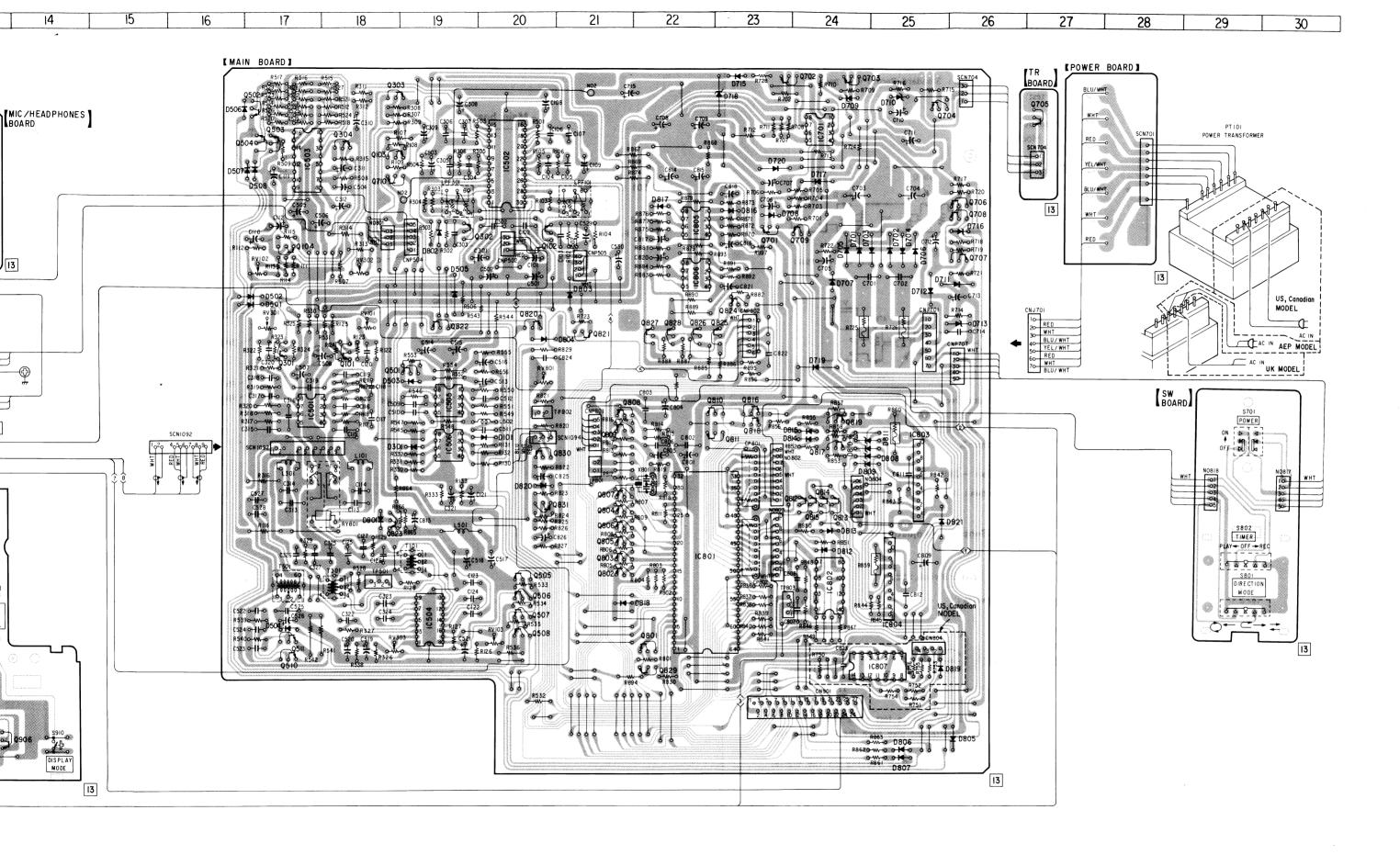
2SB1187-EF	SEL2210S-C
2SD1761 - EF	SEL2410E-D
	SEL2910A
$\mathcal{L}_{\mathbf{a}}$	
L TOO	long () s
Y F	
/ [ -	anode coin
5	
1SS202-1	SEL1210S
	3EE12103
	\
	Д
UZL-9H2L	The state of the s
4	calnode
cathode	
	SEL4214W
Ĭ	, 300421411
prose	$\cap$
•	
10521	
IUEZN	short
1	T carroce
	anade
	GP2S22B
Ţ	
	COLLECTOR
	CATHODE
	EMITTER ANODE
	2SD1761-EF  1SS202-1 HZS6A1L HZS6C1L HZS9A2L RD4.3ES-B1 UZL-7H1

### 4-2. CIRCUIT BOARDS LOCATION



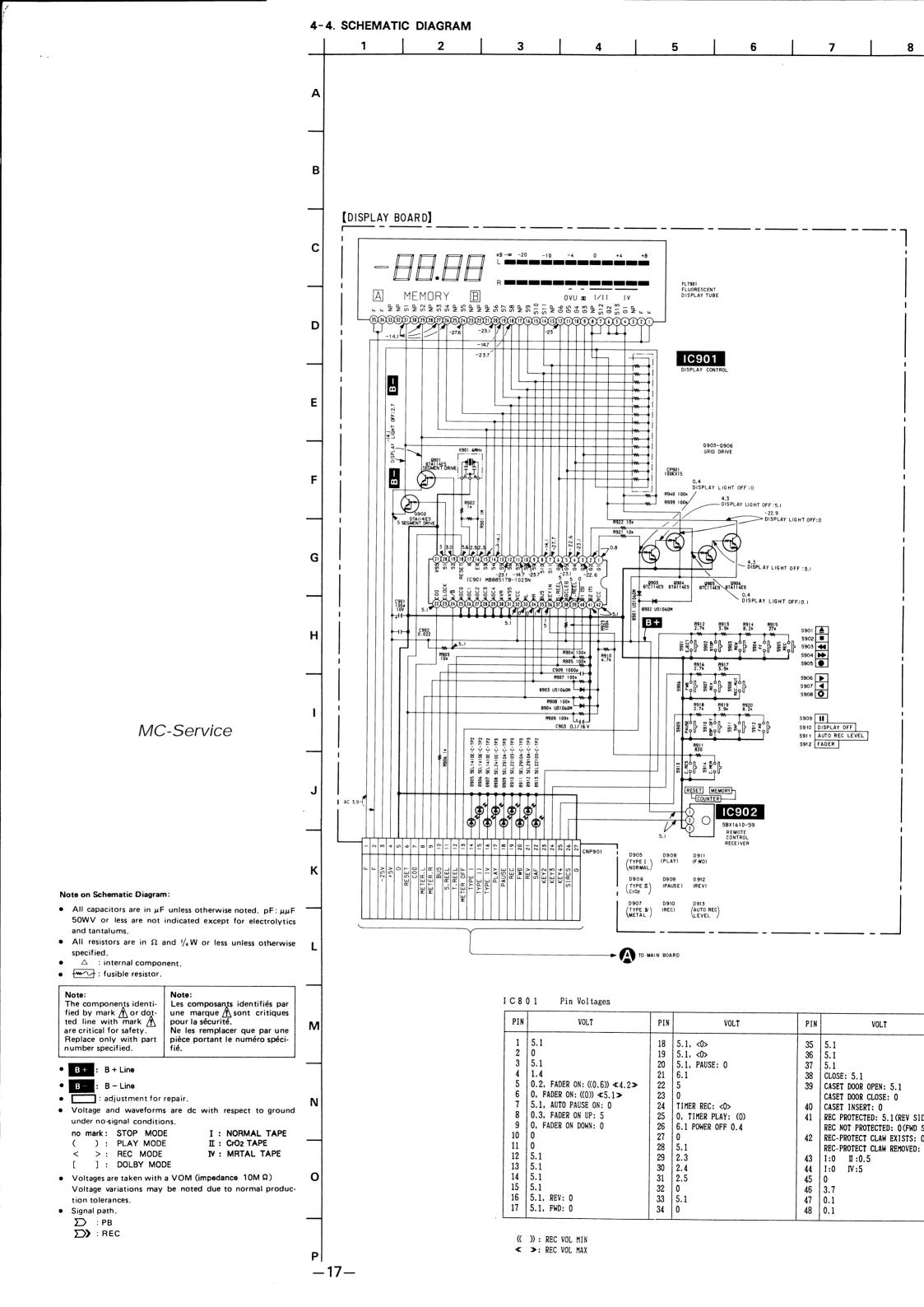
#### Semiconductor Location

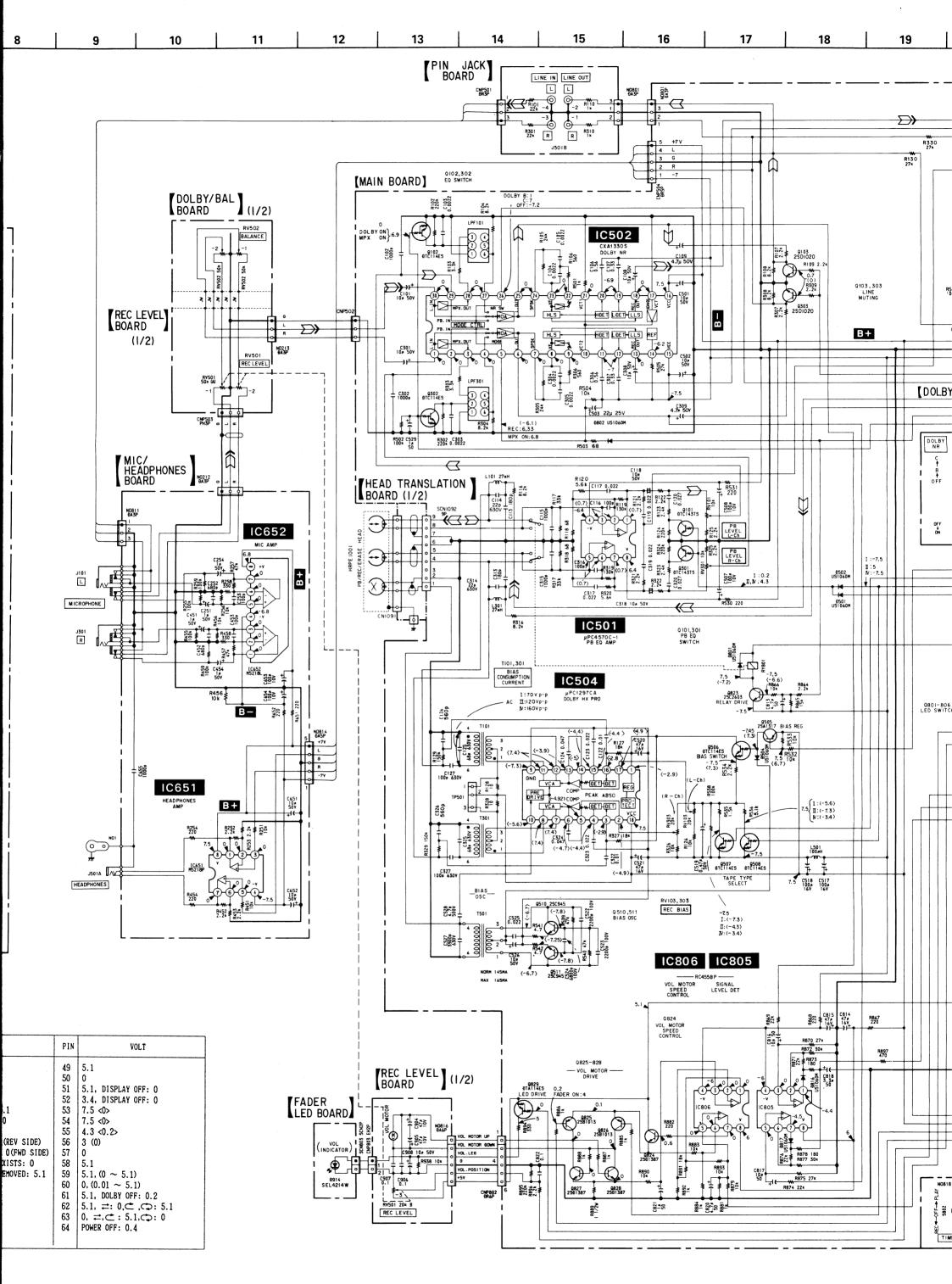




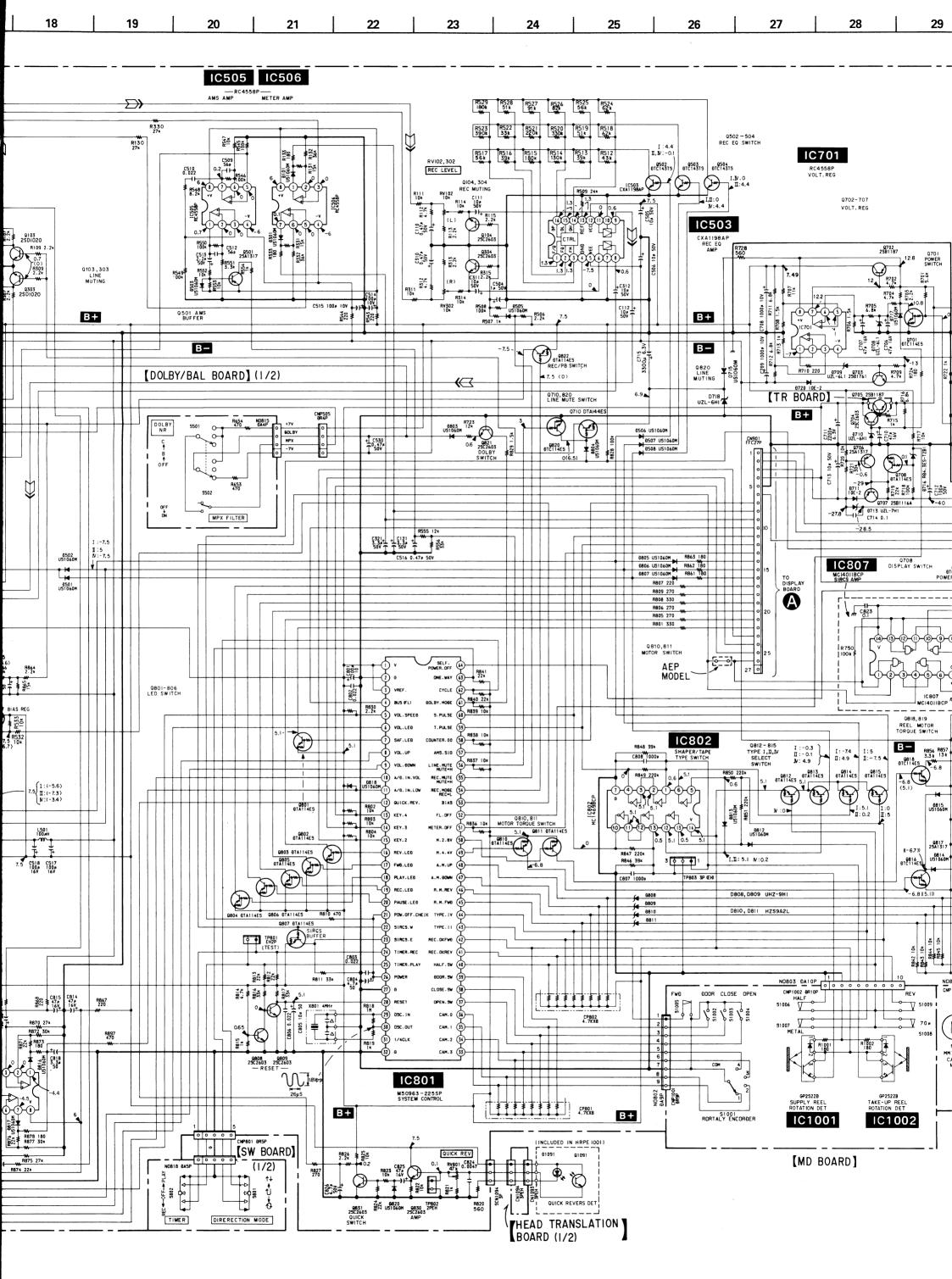
**—16**—

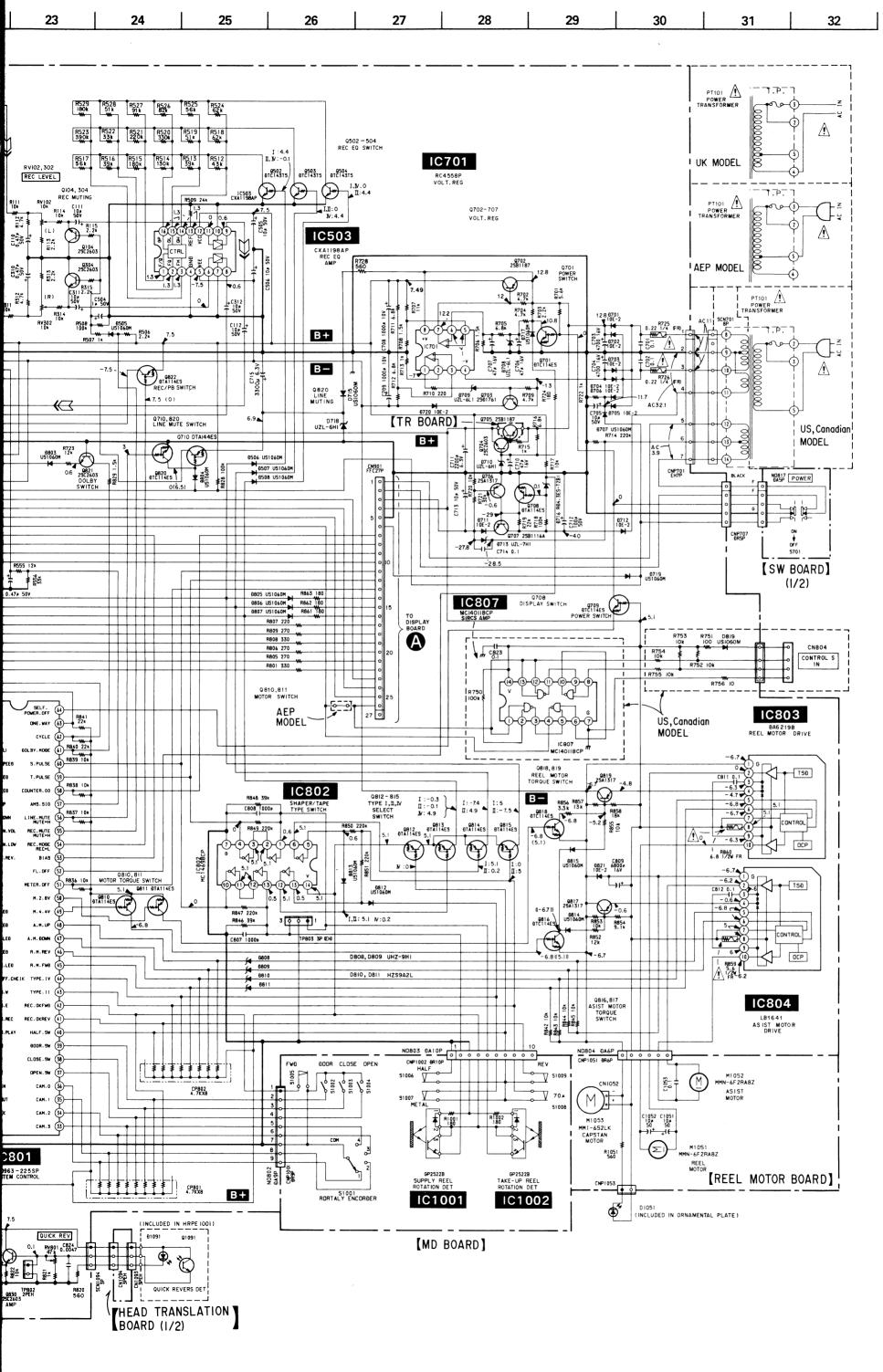
**—15—** 





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## **SECTION 5 EXPLODED VIEWS**

#### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts (RED) ...KNOB, BALANCE (WHITE)

Cabinet's Color

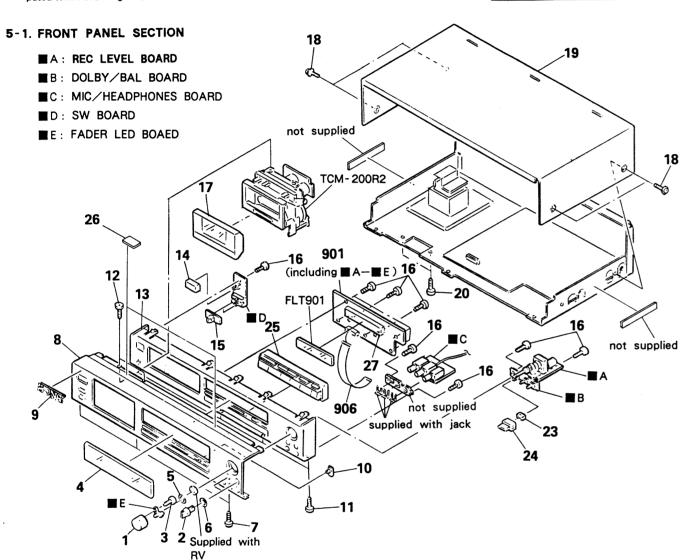
Parts' Color

The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number

Les composants identifiés par une marque A sont critiques pour la

sécurité. Ne les remplacer que par une pièce portant le numéro spécifé.

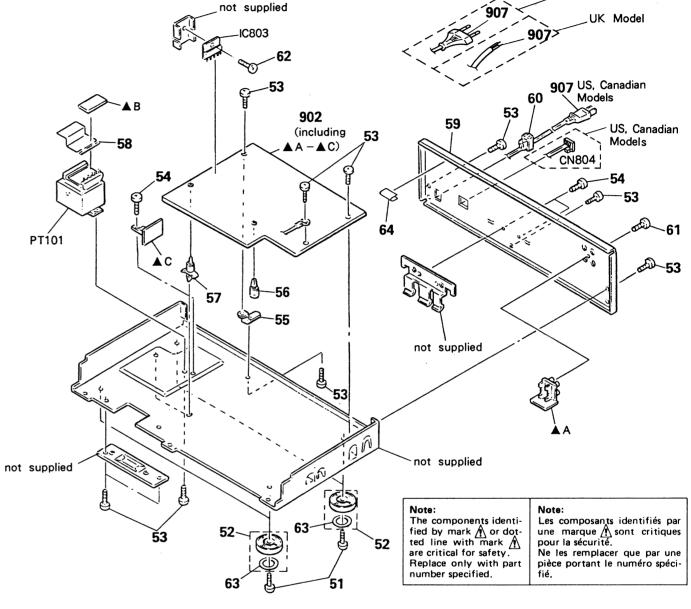


		• • • • • • • • • • • • • • • • • • • •					
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	x-3304-954-1	KNOB (R) ASSY		14	4-922-921-01	BUTTON (POWER)	
2	3-350-495-01	KNOB (VOL)		15	4-931-421-11	KNOB (T & S)	
3	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S		16	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
3	/-000-133-19	SCREW FBIF 2:0X0 TH LE II 3		17	X-3332-562-1	LID ASSY, CASSETTE	
4	3-350-838-11	WINDOW (M)					
5	3-350-440-01	SPRING	İ	18	3-704-366-01	SCREW (CASE) (M3X8)	
6	3-356-957-01	SPRING		19	3-332-578-61	CASE	
0	7-682-548-09	SCREW, +BVTT 3X8 (S)		20	7-682-547-09	SCREW +BVTT 3X6 (S)	
,	7-002-340-03	SCREW, TOWN SAO (S)		23	4-864-307-00	RING	
8	3-350-841-11	(US,Canadian)PANEL, FRONT					
O		(AEP)PANEL, FRONT		24	3-304-926-11	KNOB (A), PUSH	
	2-250-041-21	(UK)PANEL, FRONT		25	3-350-839-01	BUTTON	
	3-350-641-31	(UK) ARLE, I KONT	1		*3-350-824-01	HOLDER (FL)	
9	4-908-848-01	EMBLEM, SONY	i				
10	3-684-018-01		l	901	*A-2006-236-A	(AEP)MOUNTED PCB,	PANEL
11	7-685-534-19				*A-2006-265-A	(US, Canadian, UK)MOUNTED PCB,	PANEL
	7-682-547-04	SCREW +BV 3X6, S TIGHT			.,	(including	
12		PANEL (BASE)	1				
13	3-350-842-01	PANEL (DASE)		906	1-575-628-11	WIRE, FLAT TYPE (27 CORE)	
			ì		1-519-493-11	INDICATOR TUBE, FLUORESCHENT	
			}	F 130	1 1 313 433 11	INDIGNION TODE, TEOONEOUTENT	

#### 5-2. CHASSIS SECTION

A: PIN JACK BOARD ▲B: POWER BOARD

**▲**C: TR BOARD



5-3. MEC

535~

533

53

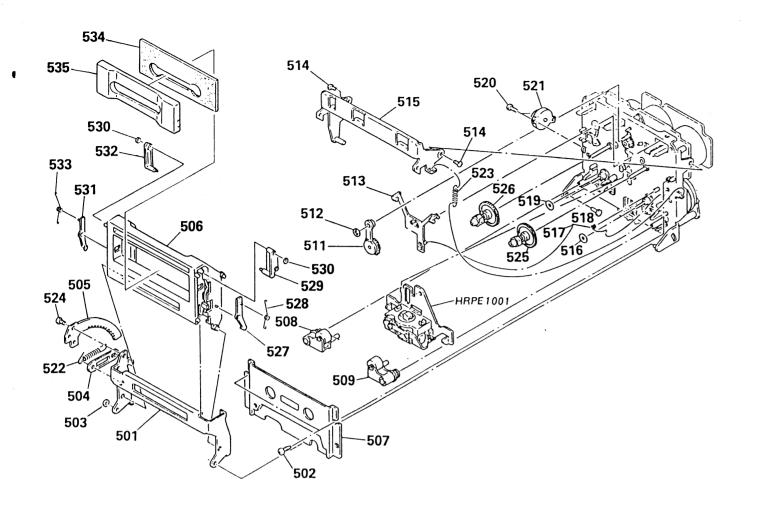
505

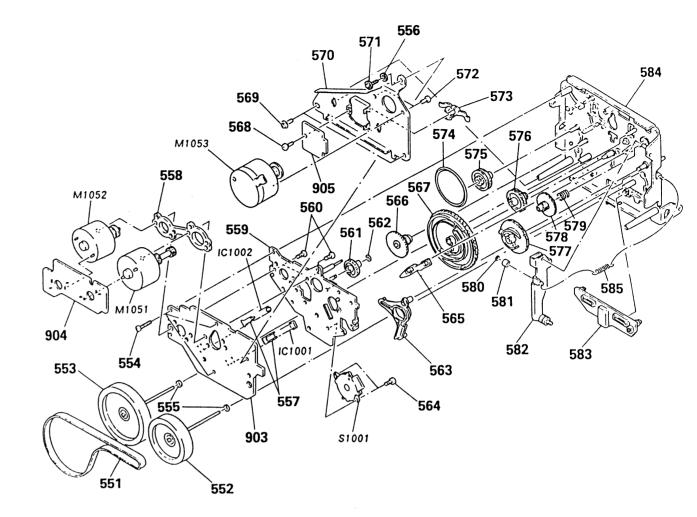
504

503

AEP Model

		63	51		<u> </u>		
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51 52 53 54	7-682-548-04 x-3304-938-2 7-682-548-09 7-682-547-09	SCREW +BVTT 3X8 (S) FOOT ASSY SCREW +BVTT 3X8 (S) SCREW +BVTT 3X6 (S)		902	*A-2006-234-A *A-2006-235-A	(AEP,UK)MOUNTED PCB, MA (US,Canadian)MOUNTED PCB, MA (including	IN
55 56	*3-332-563-01 *3-669-610-00	BRACKET (P) SPACER				(US,Canadian)CORD, POWER (AEP)CORD, POWER (UK)CORD, POWER	
57 58	*3-346-265-11 *3-337-136-11	HOLDER, PC BOARD COVER, TRANSFORMER SAFETY		CN804	1-558-350-31		ECTOR) (SIRCS)
59	*3-350-843-11 *3-350-843-41	(US,Canadian)PANEL, BACK (AEP)PANEL, BACK		IC803	8-759-973-65	IC BA6219B	,
	*3-350-843-51	(UK)PANEL, BACK			<u>A</u> .1-450-018-11 <u>A</u> .1-450-019-11	(US,Canadian)TRANSFORMER, PO (AEP,UK)TRANSFORMER, PO	
60	*3-703-244-00 *3-703-571-11	(AEP,UK)BUSHING (2104 (US,Canadian)BUSHING (S) (4516					
61 62 63 64	7-621-849-00 7-682-547-04 4-923-836-11 3-831-441-XX	SCREW, TAPPING SCREW +BVTT 3X6 (S) CUSHION CUSHION (B), CABINET					





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Remarks	
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No.	Part No.	Description	Remarks	No.	Part No.	Description
501 502 503 504 505 506	X-3356-612-1 7-685-133-19 3-558-708-21 *3-356-717-01 3-356-708-01 X-3356-611-1	SCREW +BTP 2.6X6 TYPE2 N-S WASHER, STOPPER LEVER (JOINT) GEAR (SOFT EJECT)		520 521 522 523 524 525	7-685-851-09 3-712-786-41 3-356-626-01 3-356-625-01 7-621-775-10 X-3356-627-1	SCREW +BVTT 2X4 (S) DAMPER, OIL SPRING, TENSION SPRING, TENSION SCREW +B 2.6X4 GEAR (T) ASSY
507 508 509 511 512 513	X-3343-455-1 X-3343-456-1	PLATE ASSY, ORNAMENTAL LEVER (PINCH F) ASSY LEVER (PINCH R) ASSY LEVER (FR2) ASSY WASHER, 1.6 POLYETHYLENE SLIDER (BRAKE)		526 527 528 529 530 531	X-3356-628-1 3-356-930-01 3-356-926-01 3-356-931-01 3-356-946-01 3-356-932-01	GEAR (S) ASSY LEVER (RA) SPRING (RIGHT), TORSION LEVER (RB) BUSHING LEVER (LA)
514 515 516 517 518 519	3-356-601-11 *X-3356-608-1 3-356-713-01 3-356-619-01 3-356-710-01 3-356-714-01	SCREW, STEP LEVER (LIFTER) ASSY WASHER SPRING (B), TORSION SHAFT (LEFT) (CASSETTE HOLDER) WASHER		532 533 534 535 HRPE10		LEVER (LB) SPRING (LEFT), TORSION ABSORBENT, VIBRATION PLATE (A), ORNAMENTAL A SLIDER COMPLETE ASSY

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
551 552 553 554 555	X-3356-642-1 X-3356-643-1 3-355-801-01	BELT (CAPSTAN R2) FLYWHEEL (R FWD) ASSY FLYWHEEL (R REV) ASSY SCREW (BTP 2X18) WASHER (CAPSTAN)		573 574 575 576 577	3-356-603-01 3-356-607-01 3-356-703-01	RETAINER, THRUST, CAPSTAN BELT (MODE) PULLEY (MODE) GEAR (COMMUNICATION C) GEAR (LOADING CAM)	
556 557 558 559 560 561	3-356-631-01 *3-356-628-01 *X-3356-602-1 7-621-773-95	SPACER (THRUST RETAINER R) HOLDER (SENSOR) SPACER (MOTOR) BRACKET (MOTOR R) ASSY SCREW +B 2.6X6 GEAR (COMMUNICATION B)		578 579 580 581 582 583	3-356-605-01 3-558-708-11 3-356-630-01	GEAR (LOADING) SPRING, COMPRESSION WASHER, STOPPER ROLLER (LOADING) LEVER (LOADING) ASSY SLIDER (REVERSE)	
562 563 564 565 566	3-356-613-01 7-621-772-20	WASHER (1.5), STOPPER LEVER (MODE) SCREW +B 2X5 LEVER (SELECTION) GEAR (MODE)		584 585 903 904 905	3-356-624-01 *1-632-740-11 *1-632-741-11	CHASSIS (R2)COMPLETE ASSY,MECH SPRING, TENSION PC BOARD, MD PC BOARD, REEL MOTOR PC BOARD, HEAD TRANSLATION	
567 568 569 570 571 572	3-356-615-01 7-621-770-67 4-928-635-01 *3-356-629-01 3-356-707-01 7-621-775-00	SCREW +BVTT 2.6X6 (S) SCREW, +BV (2.6X8) TAPPING BRACKET (THRUST RETAINER R)		IC1002 M1051 M1052 M1053	2 8-749-920-97 X-3356-638-1 X-3356-604-1 X-3356-635-1	PHOTO REFLECTOR GP2S22B PHOTO REFLECTOR GP2S22B MOTOR (REEL R) ASSY MOTOR (ASSIST) ASSY MOTOR (CAPSTAN R2) ASSY ENCODER, ROTARY	

Remarks

## **SECTION 5 ELECTRICAL PARTS LIST**

#### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS: MF: μF, PF: μμF.

### RESISTORS

- All resistors are in ohms. F: nonflammable

#### COILS

MMH: mH, UH: μH

### SEMICONDUCTORS

In each case, U: μ, for example: UA...: μΑ..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark  $\bigwedge$  or dotted line with mark  $\bigwedge$  are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	-			Ref.No.	Part No.	Description			
901	*A-2006-236-A *A-2006-265-A	(AEP) (US,Canadian	i,UK)MOUN	ITED PCB	, PANEL , PANEL g ■ A-E)	C254 C301 C302	1-124-438-00 1-123-875-11 1-162-294-31	ELECT ELECT CERAMIC	1MF 10MF 0.001MF	20% 20% 10%	50V 50V 50V
902	*A-2006-234-A *A-2006-235-A	(AEP,UK) (US,Canadian	i)MOUNȚE		AIN	C303 C304 C305	1-161-375-00 1-130-475-00 1-130-475-00	CERAMIC MYLAR MYLAR	0.0022MF 0.0022MF 0.0022MF	20% 5% 5%	16V 50V 50V
903 904 905 906	*1-632-740-11 *1-632-741-11 *1-634-323-11 1-575-628-11	PC BOARD, ME PC BOARD, RE PC BOARD, TR WIRE, FLAT T	AL MOTOR	RE)		C306 C307 C308	1-136-174-00 1-136-171-00 1-123-875-11	FILM FILM ELECT	0.56MF 0.33MF 10MF	5% 5% 20%	50V 50V 50V
	⚠.1-551-506-XX ♠.1-555-795-00 ♠.1-556-035-00	(US,Canadiar (AEP)	n)CORD, F	OWER OWER		C309 C310 C311	1-124-927-11 1-124-902-00 1-123-875-11	ELECT ELECT ELECT	4.7MF 0.47MF 10MF	20% 20% 20%	50V 50V 50V
C101 C102 C103	1-123-875-11 1-162-294-31 1-161-375-00	ELECT CERAMIC CERAMIC	10MF 0.001MF 0.0022MF	20% 10% 20%	50V 50V 16V	C312 C313 C314	1-123-875-11 1-162-285-31 1-136-935-11	ELECT CERAMIC FILM	10MF 180PF 22PF	20% 10% 5%	50V 50V 630V
C104 C105 C106	1-130-475-00 1-130-475-00 1-136-174-00	MYLAR MYLAR FILM	0.0022MF 0.0022MF 0.56MF	5% 5% 5%	50V 50V 50V	C315 C316 C317	1-162-294-31 1-162-282-31 1-136-157-00	CERAMIC CERAMIC FILM	0.001MF 100PF 0.022MF	10% 10% 5%	50V 50V 50V
C107 C108 C109	1-136-171-00 1-123-875-11 1-124-927-11	FILM ELECT ELECT	0.33MF 10MF 4.7MF	5% 20% 20%	50V 50V 50V	C318 C319 C320	1-124-657-00 1-161-494-00 1-136-158-00	ELECT CERAMIC FILM	10MF 0.022MF 0.027MF	20 <b>%</b> 5 <b>%</b>	50V 25V 50V
C110 C111 C112	1-124-902-00 1-123-875-11 1-123-875-11	ELECT ELECT ELECT	0.47MF 10MF 10MF	20% 20% 20%	50V 50V 50V	C321 C322 C323	1-123-382-00 1-136-153-00 1-136-157-00	ELECT FILM FILM	3.3MF 0.01MF 0.022MF	20% 5% 5%	50V 50V 50V
C113 C114 C115	1-162-285-31 1-136-935-11 1-162-294-31	CERAMIC FILM CERAMIC	180PF 22PF 0.001MF	10% 5% 10%	50V 630V 50V	C324 C325 C326	1-136-161-00 1-136-272-00 1-130-468-00	FILM FILM MYLAR	0.047MF 68PF 560PF	5% 5% 5%	50V 630V 50V
C116 C117 C118	1-162-282-31 1-136-157-00 1-124-657-00	CERAMIC FILM ELECT	100PF 0.022MF 10MF	10% 5% 20%	50V 50V 50V	C327 C451 C452	1-136-433-11 1-124-791-11 1-162-292-31	FILM ELECT CERAMIC	100PF 1MF 680PF	5% 20% 10%	630V 50V 50V
C119 C120 C121	1-161-494-00 1-136-158-00 1-123-382-00	CERAMIC FILM ELECT	0.022MF 0.027MF 3.3MF	5% 20%	25V 50V 50V	C453 C454 C501	1-162-282-31 1-124-438-00 1-123-875-11	CERAMIC ELECT ELECT	100PF 1MF 10MF	10% 20% 20%	50V 50V 50V
C122 C123 C124	1-136-153-00 1-136-157-00 1-136-161-00	FILM FILM FILM	0.01MF 0.022MF 0.047MF	5% 5% 5%	50V 50V 50V	C502 C503 C504	1-123-875-11 1-126-233-11 1-124-791-11	ELECT ELECT ELECT	10MF 22MF 1MF	20% 20% 20%	50V 25V 50V
C125 C126 C127	1-136-272-00 1-130-468-00 1-136-433-11	FILM MYLAR FILM	68PF 560PF 100PF	5% 5% 5%	630V 50V 630V	C505 C506 C507	1-123-875-11 1-123-875-11 1-124-443-00	ELECT ELECT ELECT	10MF 10MF 100MF	20% 20% 20%	50V 50V 10V
C251 C252 C253	1-124-791-11 1-162-292-31 1-162-282-31	ELECT CERAMIC CERAMIC	1MF 680PF 100PF	20% 10% 10%	50V 50V 50V	C508 C509 C510	1-124-443-00 1-162-217-31 1-161-494-00	ELECT CERAMIC CERAMIC	100MF 56PF 0.022MF	20% 5%	10V 50V 25V
0200		34W 9 14 0	.0017			C512 C513 C514	1-162-217-31 1-124-925-11 1-124-443-00	CERAMIC ELECT ELECT	56PF 2.2MF 100MF	5% 20% 20%	50V 50V 10V

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C515 C516 C517	1-124-443-00 1-124-902-00 1-126-101-11	ELECT	100MF 0.47MF 100MF	20% 20% 20%	10V 50V 16V	C824 C825 C826	1-161-377-00 1-124-477-11 1-124-927-11	CERAMIC ELECT ELECT	0.0047MF 47MF 4.7MF	30% 20% 20%	16V 16V 50V
C518 C519 C520	1-126-101-11 1-124-902-00 1-124-477-11	ELECT	100MF 0.47MF 47MF	20% 20% 20%	16V 50V 16V	C901 C902 C903	1-124-443-00 1-161-494-00 1-126-157-11	ELECT CERAMIC ELECT	100MF 0.022MF 10MF	20% 20%	10V 25V 16V
C521 C522 C523	1-124-477-11 1-136-230-00 1-136-230-00	ELECT FILM FILM	47MF 0.0022MF 0.0022MF	20% 5% 5%	16V 100V 100V	C904 C905 C906	1-124-446-11 1-124-446-11 1-164-159-11	ELECT ELECT CERAMIC	47MF 47MF 0.1MF	20% 20%	10V 10V 50V
C524 C525 C526	1-130-856-00 1-161-494-00 1-123-875-11		0.0068MF 0.022MF 10MF	5% 20%	100V 25V 50V	C907 C908 C909	1-164-159-11 1-123-875-11 1-162-294-31	CERAMIC ELECT CERAMIC	0.1MF 10MF 0.001MF	20% 10%	50V 50V 50V
C527 C528 C529	1-136-558-11 1-107-046-00 1-124-791-11	MICA	0.0039MF 4.7PF 1MF	5% 0.5PF 20%	630V 500V 50V	C1052	1-123-875-11 1-123-875-11 1-164-159-11	ELECT ELECT CERAMIC	10MF 10MF 0.1MF	20% 20%	50V 50V 50V
C530 C651 C652	1-124-902-00 1-123-875-11 1-123-875-11	ELECT	0.47MF 10MF 10MF	20% 20% 20%	50V 50V 50V	CN1001	1-558-350-31 1-506-615-11 *1-564-502-11	(US,Canadian PIN, CONNECTO PIN, CONNECTO	OR 9P		ECTOR) SIRCS)
C653 C654 C655	1-124-443-00 1-124-443-00 1-162-294-31	ELECT	100MF 100MF 0.001MF	20% 20% 10%	10V 10V 50V	CN1051 CN1052	*1-564-499-11 *1-564-718-11 *1-564-718-11	PIN, CONNECTO PIN, CONNECTO PIN, CONNECTO	OR 6P OR (SMALL T		
C701 C702 C703	1-164-159-11 1-164-159-11 1-124-898-11	CERAMIC CERAMIC ELECT	0.1MF 0.1MF 4700MF	20%	50V 50V 16V	CN1091 CN1092	*1-564-709-11 *1-564-509-11 *1-564-705-11	PIN, CONNECT PLUG, CONNECT PIN, CONNECT	OR (SMALL T	YPE) 7P	
C704 C705 C706	1-124-898-11 1-123-875-11 1-124-477-11	ELECT	4700MF 10MF 47MF	20% 20% 20%	16V 50V 16V	CN1094 CNP501	*1-564-506-11 *1-564-337-00 *1-564-705-11	PLUG, CONNECT PIN, CONNECT PIN, CONNECT	TOR 3P OR 3P		
C707 C708 C709	1-124-477-11 1-124-473-11 1-124-473-11	ELECT	47MF 1000MF 1000MF	20% 20% 20%	16V 10V 10V	CNP503	*1-564-705-11 *1-564-339-00 *1-564-338-00	PIN, CONNECTO PIN, CONNECTO PIN, CONNECTO	OR (SMALL T OR 5P		
C710 C711 C712	1-124-477-11 1-124-893-11 1-124-122-11	ELECT ELECT ELECT	47MF 2200MF 100MF	20% 20% 20%	16V 6.3V 50V	CNP701 CNP707	*1-564-510-11 *1-564-339-61 *1-564-339-71	PLUG, CONNECTO PIN, CONNECTO PIN, CONNECTO	TOR 7P OR 5P		
C713 C714 C715	1-123-875-11 1-164-159-11 1-124-473-11	CERAMIC	10MF 0.1MF 1000MF	20% 20%	50V 50V 10V	CNP802 CNP803	*1-564-340-00 *1-564-505-11 *1-568-842-11	PIN, CONNECTO PLUG, CONNECTO SOCKET, CONNECTO	OR 6P TOR 2P		
C801 C802 C803	1-124-443-00 1-161-494-00 1-161-494-00	ELECT CERAMIC CERAMIC	100MF 0.022MF 0.022MF	20%	10V 25V 25V		1-233-204-11 1-233-204-11 1-233-205-11	COMPOSITION COMPOSITION COMPOSITION	CIRCUIT BLO	CK	
C804 C805 C806	1-124-927-11 1-123-875-11 1-161-494-00	ELECT	4.7MF 10MF 0.022MF	20% 20%	50V 50V 25V	D101 D301 D501	8-719-107-94 8-719-107-94 8-719-107-94	DIODE 1SS202	-1		
C807 C808 C809	1-162-294-31 1-162-294-31 1-124-894-11	CERAMIC CERAMIC ELECT	0.001MF 0.001MF 6800MF	10% 10% 20%	50V 50V 16V	D502 D503 D504	8-719-107-94 8-719-107-94 8-719-107-94	DIODE 1SS202 DIODE 1SS202 DIODE 1SS202	-1		
C811 C812 C813	1-164-159-11 1-164-159-11 1-124-927-11		0.1MF 0.1MF 4.7MF	20%	50V 50V 50V	D505 D506 D507	8-719-107-94 8-719-107-94 8-719-107-94	DIODE 1SS202 DIODE 1SS202 DIODE 1SS202	-1		
C814 C815 C816	1-124-477-11 1-124-477-11 1-123-875-11	ELECT ELECT ELECT	47MF 47MF 10MF	20% 20% 20%	16V 16V 50V	D508 D701 D702	8-719-107-94 8-719-200-77 8-719-200-77	DIODE 1SS202- DIODE 10E2N DIODE 10E2N	-1		
C817 C818 C820	1-123-875-11 1-123-382-00 1-124-927-11	ELECT ELECT ELECT	10MF 3.3MF 4.7MF	20% 20% 20%	50V 50V 50V	D703 D704 D705	8-719-200-77 8-719-200-77 8-719-200-77	DIODE 10E2N DIODE 10E2N DIODE 10E2N			
C821 C822 C823	1-124-791-11 1-164-159-11 1-164-159-11	ELECT CERAMIC (US,Canadian		20%	50V 50V	D706 D707 D708	8-719-200-77 8-719-107-94 8-719-933-33	DIODE 10E2N DIODE 1SS202 DIODE HZS6A1			
		* * * ULRAII	TO OTHER		301						

Ref.No.	Part No.	Description
D709	8-719-933-33	DIODE HZS6A1L
D710	8-719-933-39	DIODE HZS6C1L
D711	8-719-200-77	DIODE 10E2N
D712	8-719-200-77	DIODE 10E2N
D713	8-719-000-93	DIODE UZL-7H1
D715	8-719-107-94	DIODE 1SS202-1
D716	8-719-109-74	DIODE RD4.3ES-B1
D717	8-719-107-94	DIODE 1SS202-1
D718	8-719-933-39	DIODE HZS6C1L
D719	8-719-107-94	DIODE 1SS202-1
D720	8-719-200-77	DIODE 10E2N
D801	8-719-107-94	DIODE 1SS202-1
D802	8-719-107-94	DIODE 1SS202-1
D803	8-719-107-94	DIODE 1SS202-1
D804	8-719-107-94	DIODE 1SS202-1
D805	8-719-107-94	DIODE 1SS202-1
D806	8-719-107-94	DIODE 1SS202-1
D807	8-719-107-94	DIODE 1SS202-1
D808	8-719-001-21	DIODE UZL-9H1
D809	8-719-001-21	DIODE UZL-9H1
D810	8-719-933-54	DIODE HZS9A2L
D811	8-719-933-54	DIODE HZS9A2L
D812	8-719-107-94	DIODE 1SS202-1
D813	8-719-107-94	DIODE 1SS202-1
D814	8-719-107-94	DIODE 1SS202-1
D815	8-719-107-94	DIODE 1SS202-1
D816	8-719-107-94	DIODE 1SS202-1
D817	8-719-107-94	DIODE 1SS202-1
D818	8-719-107-94	DIODE 1SS202-1
D819	8-719-107-94	(US,Canadian)DIODE 1SS202-1
D820	8-719-107-94	DIODE 1SS202-1
D821	8-719-200-77	DIODE 10E2N
D901	8-719-107-94	DIODE 1SS202-1
D902	8-719-107-94	DIODE 1SS202-1
D903	8-719-107-94	DIODE 1SS202-1
D904	8-719-107-94	DIODE 1SS202-1
D905	8-719-302-45	DIODE SEL1210S
D906	8-719-302-45	DIODE SEL1210S
D907	8-719-302-45	DIODE SEL1210S
D908	8-719-301-44	DIODE SEL2410E-D
D909	8-719-301-59	DIODE SEL2910A
D910	8-719-301-38	DIODE SEL2210S-C
D911	8-719-301-59	DIODE SEL2910A
D912	8-719-301-59	DIODE SEL2910A
D913	8-719-301-38	DIODE SEL2210S-C
D914	8-719-303-33	DIODE SEL4214W
FLT901	1-519-493-11	INDICATOR TUBE, FLUORESCENT
HRPE1001	A-2003-533-A	SLIDER COMPLETE ASSY
IC501	8-759-111-44	IC UPC4570C-1
IC502	8-752-036-34	IC CXA1330S
IC503	8-752-038-02	IC CXA1198AP
I C504	8-759-106-56	IC UPC1297CA
I C505	8-759-945-58	IC RC4558P
I C506	8-759-945-58	IC RC4558P

Ref.No.	Part No.	Description
I C651 I C652 I C701	8-759-634-51 8-759-634-50 8-759-945-58	IC M5218AP IC M5218AL IC RC4558P
I C801 I C802 I C803	8-759-634-80 8-759-240-69 8-759-973-95	IC M50963-225SP IC TC4069UBP IC BA6219B
I C804 I C805 I C806	8-759-822-09 8-759-945-58 8-759-945-58	IC LB1641 IC RC4558P IC RC4558P
IC807 IC901 IC902	8-759-140-00 8-759-983-68 8-741-100-48	(US,Canadian)IC UPD4011BC IC MB88517B-1023N IC SBX1610-59
	8-749-920-97 8-749-920-97	PHOTO REFLECTOR GP2S22B PHOTO REFLECTOR GP2S22B
J101	1-507-854-00	(AEP)JACK, LARGE TYPE (MICROPHONE
J101	1-507-854-21	LEFT) (US,Canadian,UK)JACK, LARGE TYPE (MICROPHONE LEFT)
J301	1-507-854-00	(AEP)JACK, LARGE TYPE (MICROPHONE
J301	1-507-854-21	RIGHT) (US,Canadian,UK)JACK, LARGE TYPE (MICROPHONE RIGHT)
J501A J501B	1-507-796-71 1-565-258-11	JACK (HEADPHONES) JACK, PIN 4P (LINE IN/OUT)
L101 L301 L501	1-410-780-11 1-410-780-11 1-408-080-00	INDUCTOR 27MMH INDUCTOR 27MMH INDUCTOR 100UH
	1-236-475-11 1-236-475-11	FILTER, LOW PASS FILTER, LOW PASS
M1051 M1052 M1053	X-3356-638-1 X-3356-604-1 X-3356-635-1	MOTOR (REEL R) ASSY MOTOR (ASSIST) ASSY MOTOR (CAPSTAN R2) ASSY
	.1-450-018-11 .1-450-019-11	(US,Canadian)TRANSFORMER, POWER (AEP,UK)TRANSFORMER, POWER
Q101 Q102 Q103	8-729-900-74 8-729-900-80 8-729-142-25	TRANSISTOR DTC143TS TRANSISTOR DTC114ES TRANSISTOR 2SD1020-HFE
Q104 Q301 Q302	8-729-620-05 8-729-900-74 8-729-900-80	TRANSISTOR 2SC2603-EF TRANSISTOR DTC143TS TRANSISTOR DTC114ES
0303 0304 0501	8-729-142-25 8-729-620-05 8-729-821-04	TRANSISTOR 2SD1020-HFE TRANSISTOR 2SC2603-EF TRANSISTOR 2SA1317-STU
Q502 Q503 Q504	8-729-900-80 8-729-900-80 8-729-900-80	TRANSISTOR DTC114ES TRANSISTOR DTC114ES TRANSISTOR DTC114ES
Q505 Q506 Q507	8-729-821-04 8-729-900-80 8-729-900-80	TRANSISTOR 2SA1317-STU TRANSISTOR DTC114ES TRANSISTOR DTC114ES
Q508 Q510 Q511	8-729-900-80 8-729-194-57 8-729-194-57	TRANSISTOR DTC114ES TRANSISTOR 2SC945-P TRANSISTOR 2SC945-P
Q701 Q702 Q703	8-729-900-80 8-729-920-97 8-729-920-98	TRANSISTOR DTC114ES TRANSISTOR 2SB1187-EF TRANSISTOR 2SD1761-EF

Note:
The components identified by mark A or dotted line with mark Replace only with part number specified.

Note:
Les composants identifiés par une marque À sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	ı	Ref.No.	Part No.	Description			
Q704 Q705 Q706	8-729-920-97	TRANSISTOR 2SC2603-EF TRANSISTOR 2SB1187-EF TRANSISTOR 2SA1317-STU		R113 R114 R115 R116	1-249-421-11 1-249-429-11 1-249-421-11 1-249-428-11		2.2K 10K 2.2K 8.2K	5%	1/4W 1/4W 1/4W 1/4W
Q707 Q708 Q709	8-729-140-04 8-729-900-61 8-729-900-80	TRANSISTOR 2SB1116A-L TRANSISTOR DTA114ES TRANSISTOR DTC114ES		R117 R118 R119	1-249-435-11 1-249-403-11 1-247-882-11	CARBON CARBON CARBON	33K 68 130K	5% 5% 5%	1/4W 1/4W 1/4W
Q710 Q801 Q802	8-729-900-65 8-729-900-61 8-729-900-61	TRANSISTOR DTA144ES TRANSISTOR DTA114ES TRANSISTOR DTA114ES		R120 R121 R122	1-249-426-11 1-249-421-11 1-249-421-11	CARBON CARBON CARBON	5.6K 2.2K 2.2K	5%	1/4W 1/4W 1/4W
Q803 Q804 Q805	8-729-900-61 8-729-900-61 8-729-900-61	TRANSISTOR DTA114ES TRANSISTOR DTA114ES TRANSISTOR DTA114ES		R123 R124 R125	1-247-840-00 1-247-887-00 1-249-421-11	CARBON CARBON CARBON	2.4K 220K 2.2K	5%	1/4W 1/4W 1/4W
Q806 Q807 Q808	8-729-900-61 8-729-900-61 8-729-620-05	TRANSISTOR DTA114ES TRANSISTOR DTA114ES TRANSISTOR 2SC2603-EF		R126 R127 R128	1-249-429-11		10K 18K 10	5% 5% 5%	1/4W 1/4W 1/4W
Q809 Q810 Q811	8-729-620-05 8-729-900-61 8-729-900-61	TRANSISTOR 2SC2603-EF TRANSISTOR DTA114ES TRANSISTOR DTA114ES		R129 R130 R131	1-247-883-00 1-249-434-11 1-249-431-11		150K 27K 15K	5% 5% 5%	1/4W 1/4W 1/4W
Q812 Q813 Q814	8-729-900-61 8-729-900-61 8-729-900-61	TRANSISTOR DTA114ES TRANSISTOR DTA114ES TRANSISTOR DTA114ES		R132 R133 R232	1-247-868-11 1-249-408-11 1-247-868-11	CARBON CARBON CARBON	36K 180 36K	5% 5% 5%	1/4W 1/4W 1/4W
Q815 Q816 Q817	8-729-900-61 8-729-900-80 8-729-821-04	TRANSISTOR DTA114ES TRANSISTOR DTC114ES TRANSISTOR 2SA1317-STU		R251 R252 R253	1-249-429-11 1-249-421-11 1-249-421-11	CARBON	10K 2.2K 2.2K	5% 5%	1/4W 1/4W 1/4W
Q818 Q819 Q820	8-729-900-80 8-729-821-04 8-729-900-80	TRANSISTOR DTC114ES TRANSISTOR 2SA1317-STU TRANSISTOR DTC114ES		R254 R255 R256	1-249-409-11 1-249-441-11 1-249-429-11		220 100K 10K	5%	1/4W 1/4W 1/4W
Q821 Q822 Q823	8-729-620-05 8-729-900-61 8-729-620-05	TRANSISTOR 2SC2603-EF TRANSISTOR DTA114ES TRANSISTOR 2SC2603-EF		R257 R258 R259	1-249-437-11 1-249-411-11 1-249-441-11	CARBON	47K 330 100K	5% 5% 5%	1/4W 1/4W 1/4W
Q824 Q825 Q826	8-729-801-93 8-729-801-84 8-729-801-84	TRANSISTOR 2SD1387 TRANSISTOR 2SB1013-4 TRANSISTOR 2SB1013-4		R301 R302 R303	1-249-433-11 1-247-887-00 1-249-423-11	CARBON CARBON CARBON	22K 220K 3.3K	5% 5%	1/4W 1/4W 1/4W
Q827 Q828 Q829	8-729-801-93 8-729-801-93 8-729-900-61	TRANSISTOR 2SD1387 TRANSISTOR 2SD1387 TRANSISTOR DTA114ES		R304 R305 R306	1-249-428-11 1-247-864-11 1-249-414-11	CARBON CARBON	8.2K 24K 560	5% 5% 5%	1/4W 1/4W 1/4W
Q830 Q831 Q901	8-729-620-05 8-729-620-05 8-729-900-61	TRANSISTOR 2SC2603-EF TRANSISTOR 2SC2603-EF TRANSISTOR DTA114ES		R307 R308 R309	1-249-421-11 1-249-428-11 1-249-421-11	CARBON CARBON CARBON	2.2K 8.2K 2.2K	5% 5%	1/4W 1/4W 1/4W
Q902 Q903 Q904	8-729-900-80 8-729-900-61	TRANSISTOR DTA114ES TRANSISTOR DTC114ES TRANSISTOR DTA114ES		R310 R311 R312	1-249-417-11 1-249-429-11 1-249-425-11	CARBON CARBON CARBON	1K 10K 4.7K	5% 5%	1/4W 1/4W 1/4W
Q905 Q906 R101	8-729-900-80 8-729-900-61 1-249-433-11	TRANSISTOR DTC114ES TRANSISTOR DTA114ES  CARBON 22K 5% 1/4	1w	R313 R314 R315	1-249-421-11 1-249-429-11 1-249-421-11	CARBON CARBON CARBON	2.2K 10K		1/4W 1/4W 1/4W
R102 R103 R104	1-247-887-00 1-249-423-11 1-249-428-11	CARBON 220K 5% 1/4 CARBON 3.3K 5% 1/4 CARBON 8.2K 5% 1/4	₹₩ <b>1</b> ₩	R316 R317 R318	1-249-428-11 1-249-435-11 1-249-403-11	CARBON CARBON CARBON	8.2K 33K 68		1/4W 1/4W 1/4W
R105 R106 R107	1-247-864-11 1-249-414-11 1-249-421-11	CARBON 24K 5% 1/4 CARBON 560 5% 1/4 CARBON 2.2K 5% 1/4	1W 1W	R319 R320 R321	1-247-882-11 1-249-426-11 1-249-421-11	CARBON CARBON CARBON	130K	5% 5%	1/4W 1/4W 1/4W
R108 R109 R110	1-249-428-11 1-249-421-11 1-249-417-11	CARBON 8.2K 5% 1/4 CARBON 2.2K 5% 1/4 CARBON 1K 5% 1/4	łw łw	R322 R323 R324	1-249-421-11 1-247-840-00 1-247-887-00	CARBON CARBON CARBON	2.2K 2.4K 220K	5% 5%	1/4W 1/4W 1/4W
R111 R112	1-249-429-11 1-249-425-11	CARBON 10K 5% 1/4 CARBON 4.7K 5% 1/4	lW .	R325 R326 R327	1-249-421-11 1-249-429-11 1-249-432-11	CARBON CARBON CARBON		5% 5% 5%	1/4W 1/4W 1/4W

Ref.No.	Part No.	Description		1	Ref.No.	Part No.	Description		
R328 R329 R330 R331	1-249-393-11 1-247-883-00 1-249-434-11 1-249-431-11	CARBON CARBON CARBON CARBON	10 5% 150K 5% 27K 5% 15K 5%	1/4W 1/4W 1/4W 1/4W	R547 R548 R549	1-249-429-11 1-249-428-11 1-249-441-11	CARBON CARBON CARBON	10K 5% 8.2K 5% 100K 5%	1/4W
R332	1-247-868-11	CARBON	36K 5%	1/4W	R550	1-249-441-11	CARBON	100K 5%	1/4W
R333	1-249-408-11	CARBON	180 5%	1/4W	R551	1-249-423-11	CARBON	3.3K 5%	
R451	1-249-429-11	CARBON	10K 5%	1/4W	R552	1-249-429-11	CARBON	10K 5%	
R452	1-249-421-11	CARBON	2.2K 5%	1/4W	R553	1-249-429-11	CARBON	10K 5%	1/4W
R453	1-249-421-11	CARBON	2.2K 5%	1/4W	R554	1-249-417-11	CARBON	1K 5%	1/4W
R454	1-249-409-11	CARBON	220 5%	1/4W	R555	1-249-430-11	CARBON	12K 5%	1/4W
R455	1-249-441-11	CARBON	100K 5%	1/4W	R556	1-249-435-11	CARBON	33K 5%	1/4W
R456	1-249-429-11	CARBON	10K 5%	1/4W	R651	1-249-409-11	CARBON	220 5%	
R457	1-249-437-11	CARBON	47K 5%	1/4W	R652	1-249-409-11	CARBON	220 5%	
R458	1-249-411-11	CARBON	330 5%	1/4W	R653	1-249-413-11	CARBON	470 5%	1/4W
R459	1-249-441-11	CARBON	100K 5%	1/4W	R654	1-249-413-11	CARBON	470 5%	1/4W
R501	1-249-417-11	CARBON	1K 5%	1/4W	R701	1-249-426-11	CARBON	5.6K 5%	1/4W
R502	1-249-441-11	CARBON	100K 5%	1/4W	R702	1-249-425-11	CARBON	4.7K 5%	1/4W
R503	1-249-403-11	CARBON	68 5%	1/4W	R703	1-249-421-11	CARBON	2.2K 5%	1/4W
R504	1-249-429-11	CARBON	10K 5%	1/4W	R704	1-249-425-11	CARBON	4.7K 5%	1/4W
R505	1-249-434-11	CARBON	27K 5%	1/4W	R705	1-249-427-11	CARBON	6.8K 5%	1/4W
R506	1-249-421-11	CARBON	2.2K 5%	1/4W	R706	1-249-419-11	CARBON	1.5K 5%	1/4W
R507	1-249-417-11	CARBON	1K 5%	1/4W	R707	1-247-856-00	CARBON	11K 5%	1/4W
R508	1-249-441-11	CARBON	100K 5%	1/4W	R708	1-249-419-11	CARBON	1.5K 5%	1/4W
R509	1-247-864-11	CARBON	24K 5%	1/4W	R709	1-249-425-11	CARBON	4.7K 5%	1/4W
R512	1-247-870-11	CARBON	43K 5%	1/4W	R710	1-249-409-11	CARBON	220 5%	1/4W
R513	1-249-436-11	CARBON	39K 5%	1/4W	R711	1-249-427-11	CARBON	6.8K 5%	1/4W
R514	1-247-882-11	CARBON	130K 5%	1/4W	R712	1-249-427-11	CARBON	6.8K 5%	1/4W
R515	1-247-885-00	CARBON	180K 5%	1/4W	R713	1-249-417-11	CARBON	1K 5%	1/4W
R516	1-249-436-11	CARBON	39K 5%	1/4W	R714	1-247-887-00	CARBON	220K 5%	1/4W
R517	1-249-438-11	CARBON	56K 5%	1/4W	R715	1-249-417-11	CARBON	1K 5%	1/4W
R518	1-247-874-11	CARBON	62K 5%	1/4W	R716	1-249-427-11	CARBON	6.8K 5%	1/4W
R519	1-247-872-11	CARBON	51K 5%	1/4W	R717	1-249-429-11	CARBON	10K 5%	1/4W
R520	1-247-891-00	CARBON	330K 5%	1/4W	R718	1-249-441-11	CARBON	100K 5%	1/4W
R521	1-247-887-00	CARBON	220K 5%	1/4W	R719	1-249-433-11	CARBON	22K 5%	1/4W
R522	1-249-435-11	CARBON	33K 5%	1/4W	R720	1-249-429-11	CARBON	10K 5%	1/4W
R523	1-247-893-11	CARBON	390K 5%	1/4W	R721	1-249-434-11	CARBON	27K 5%	1/4W
R524	1-247-874-11	CARBON	62K 5%	1/4W	R722	1-249-417-11	CARBON	1K 5%	1/4W
R525 R526 R527	1-249-438-11 1-249-440-11 1-247-878-00	CARBON CARBON CARBON	56K 5% 82K 5% 91K 5%	1/4W 1/4W 1/4W		1-249-430-11 1-249-408-11 .1-219-136-11	CARBON CARBON FUSIBLE	12K 5% 180 5% 0.22 10%	,
R528 R529 R530	1-247-872-11 1-247-885-00 1-249-409-11	CARBON CARBON CARBON	51K 5% 180K 5% 220 5%	1/4W 1/4W 1/4W	R726 A. R728 R750 R751	1-219-136-11 1-249-414-11 1-249-441-11 1-249-405-11	FUSIBLE CARBON (US,Canadian) (US,Canadian)	0.22 10% 560 5% CARBON CARBON	1/4W F 1/4W 100K 5% 1/4W 100 5% 1/4W
R531	1-249-409-11	CARBON	220 5%	1/4W	R752	1-249-429-11	(US,Canadian)	CARBON	10K 5% 1/4W
R532	1-249-429-11	CARBON	10K 5%	1/4W	R753	1-249-429-11	(US,Canadian)		10K 5% 1/4W
R533	1-249-429-11	CARBON	10K 5%	1/4W	R754	1-249-429-11	(US,Canadian)		10K 5% 1/4W
R534	1-249-421-11	CARBON	2.2K 5%	1/4W	R755	1-249-429-11	(US,Canadian)		10K 5% 1/4W
R535	1-249-419-11	CARBON	1.5K 5%	1/4W	R756	1-249-393-11	(US,Canadian)		10 5% 1/4W
R536	1-247-848-11	CARBON	5.1K 5%	1/4W	R801	1-249-411-11	CARBON		1/4W
R538	1-249-441-11	CARBON	100K 5%	1/4W	R802	1-249-429-11	CARBON	10K 5%	1/4W
R539	1-249-437-11	CARBON	47K 5%	1/4W	R803	1-249-429-11	CARBON	10K 5%	1/4W
R540	1-249-437-11	CARBON	47K 5%	1/4W	R804	1-249-429-11	CARBON	10K 5%	1/4W
R541	1-249-389-11	CARBON	4.7 5%	1/4W	R805	1-249-410-11	CARBON	270 5%	1/4W
R542	1-249-389-11	CARBON	4.7 5%	1/4W	R806	1-249-410-11	CARBON	270 5%	1/4W
R543	1-249-409-11	CARBON	220 5%	1/4W	R807	1-249-409-11	CARBON	220 5%	1/4W
R544	1-249-409-11	CARBON	220 5%	1/4W		1-249-411-11	CARBON	330 5%	1/4W
R545	1-249-441-11	CARBON	100K 5%	1/4W		1-249-410-11	CARBON	270 5%	1/4W
R546	1-249-441-11	CARBON	100K 5%	1/4W		1-249-413-11	CARBON	470 5%	1/4W

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			1	Ref.No	. Part No.	Descrip	tion		
R811	1-249-435-11	CARBON	33K	5%	1/4W	R873	1-249-433-11	CARBON	180	5%	1/4W
R812	1-249-433-11	CARBON	22K	5%	1/4W	R874		CARBON	22K	5%	1/4W
R813	1-249-433-11	CARBON	22K	5%	1/4W	R875		CARBON	27K	5%	1/4W
R814	1-249-425-11	CARBON	4.7K	5%	1/4W	R876	1-247-866-11	CARBON	22K	5%	1/4W
R815	1-249-417-11	CARBON	1K	5%	1/4W	R877		CARBON	30K	5%	1/4W
R816	1-249-435-11	CARBON	33K	5%	1/4W	R878		CARBON	180	5%	1/4W
R817	1-249-435-11	CARBON	33K	5%	1/4W	R879	1-249-417-11	CARBON	10K	5%	1/4W
R818	1-247-903-00	CARBON	1M	5%	1/4W	R881		CARBON	1K	5%	1/4W
R819	1-249-417-11	CARBON	1K	5%	1/4W	R882		CARBON	220	5%	1/4W
R820	1-249-414-11	CARBON	560	5%	1/4W	R883	1-249-417-11	CARBON	10K	5%	1/4W
R821	1-249-417-11	CARBON	1K	5%	1/4W	R884		CARBON	1K	5%	1/4W
R822	1-249-429-11	CARBON	10K	5%	1/4W	R885		CARBON	1K	5%	1/4W
R823	1-249-429-11	CARBON	10K	5%	1/4W	R886	1-249-417-11	CARBON	1K	5%	1/4W
R824	1-249-433-11	CARBON	22K	5%	1/4W	R887		CARBON	1K	5%	1/4W
R825	1-249-429-11	CARBON	10K	5%	1/4W	R888		CARBON	1K	5%	1/4W
R826 R827 R828	1-249-421-11 1-249-410-11 1-249-441-11	CARBON CARBON CARBON	2.2K 270 100K	5%	1/4W 1/4W 1/4W	R889 R890 R891		CARBON CARBON CARBON	1 10K 18K	5% 5% 5%	1/2W 1/4W 1/4W
R829	1-249-419-11	CARBON	1.5K	5%	1/4W	R892	1-249-429-11	CARBON	1K	5%	1/4W
R830	1-249-421-11	CARBON	2.2K	5%	1/4W	R893		CARBON	10K	5%	1/4W
R836	1-249-429-11	CARBON	10K	5%	1/4W	R894		CARBON	330	5%	1/4W
R837	1-249-429-11	CARBON	10K	5%	1/4W	R895	1-247-887-00	CARBON	220K	5%	1/4W
R838	1-249-429-11	CARBON	10K	5%	1/4W	R896	1-249-421-11	CARBON	2.2K	5%	1/4W
R839	1-249-429-11	CARBON	10K	5%	1/4W	R897	1-249-413-11	CARBON	470	5%	1/4W
R840	1-249-433-11	CARBON	22K	5%	1/4W	R901	1-247-903-00	CARBON	1M	5%	1/4W
R841	1-249-433-11	CARBON	22K	5%	1/4W	R902	1-249-417-11	CARBON	1K	5%	1/4W
R842	1-249-429-11	CARBON	10K	5%	1/4W	R903	1-249-429-11	CARBON	10K	5%	1/4W
R843	1-249-429-11	CARBON	10K	5%	1/4W	R904	1-249-441-11	CARBON	100K	5%	1/4W
R844	1-249-429-11	CARBON	10K	5%	1/4W	R905	1-249-441-11	CARBON	100K	5%	1/4W
R845	1-249-429-11	CARBON	10K	5%	1/4W	R906	1-249-417-11	CARBON	1K	5%	1/4W
R846	1-249-436-11	CARBON	39K	5%	1/4W	R907	1-249-441-11	CARBON	100K	5%	1/4W
R847	1-247-887-00	CARBON	220K	5%	1/4W	R908	1-249-441-11	CARBON	100K	5%	1/4W
R848	1-249-436-11	CARBON	39K	5%	1/4W	R909	1-249-441-11	CARBON	100K	5%	1/4W
R849	1-247-887-00	CARBON	220K	5%	1/4W	R910	1-249-425-11	CARBON	4.7K	5%	1/4W
R850	1-247-887-00	CARBON	220K	5%	1/4W	R911	1-249-416-11	CARBON	820		1/4W
R851	1-247-887-00	CARBON	220K	5%	1/4W	R912	1-249-422-11	CARBON	2.7K		1/4W
R852	1-249-430-11	CARBON	12K	5%	1/4W	R913	1-249-424-11	CARBON	3.9K		1/4W
R853	1-249-429-11	CARBON	10K	5%	1/4W	R914	1-249-428-11	CARBON	8.2K		1/4W
R854	1-247-854-11	CARBON	9.1K	5%	1/4W	R915	1-249-434-11	CARBON	27K		1/4W
R855	1-249-429-11	CARBON	10K	5%	1/4W	R916	1-249-422-11	CARBON	2.7K		1/4W
R856	1-249-423-11	CARBON	3.3K	5%	1/4W	R917	1-249-424-11	CARBON	3.9K		1/4W
R857	1-247-858-11	CARBON	13K	5%	1/4W	R918	1-249-422-11	CARBON	2.7K		1/4W
	1-249-432-11	CARBON	18K	5%	1/4W	R919	1-249-424-11	CARBON	3.9K	5%	1/4W
	.1-212-952-00	FUSIBLE	5.6	5%	1/2W F	R920	1-249-428-11	CARBON	8.2K	5%	1/4W
	.1-212-954-11	FUSIBLE	6.8	5%	1/2W F	R921	1-249-429-11	CARBON	10K	5%	1/4W
R861	1-249-408-11	CARBON	180	5%	1/4W	R922	1-249-429-11	CARBON	10K	5%	1/4W
R862	1-249-408-11	CARBON	180	5%	1/4W	R923	1-249-441-11	CARBON	100K	5%	1/4W
R863	1-249-408-11	CARBON	180	5%	1/4W	R938	1-249-429-11	CARBON	10K	5%	1/4W
R864 R865 R866	1-249-421-11 1-249-431-11 1-249-429-11	CARBON CARBON CARBON	2.2K 15K 10K	5% 5% 5%	1/4W 1/4W 1/4W	R939 R940	1-249-441-11	CARBON CARBON	100K 100K	5% 5%	1/4W 1/4W
R867	1-249-409-11	CARBON	220	5%	1/4W	R1001	1-249-408-11	CARBON	180	5%	1/4W
R868	1-249-409-11	CARBON	220	5%	1/4W	R1002		CARBON	180	5%	1/4W
R869	1-249-433-11	CARBON	22K	5%	1/4W	R1051		CARBON	560	5%	1/4W
R870 R871 R872	1-249-434-11 1-249-433-11 1-247-866-11	CARBON CARBON CARBON	27K 22K 30K	5% 5% 5%	1/4W 1/4W 1/4W		Note: The components fied by mark A ted line with mare critical for saf Replace only winumber specified	or dot- ark 1 ety, th part	Note: Les composa une marque pour la sécur Ne les remp pièce portan fié.	_∕r\ so ité. Iacer	ont critiques que par une

Ref.No.	Part No.	Description
RV 101 RV 102 RV 103	1-238-016-11 1-238-016-11 1-238-017-11	RES, ADJ, CARBON 10K (PB LEVEL L-CH) RES, ADJ, CARBON 10K (REC LEVEL L-CH) RES, ADJ, CARBON 22K (BIAS L-CH)
RV 301 RV 302 RV 303	1-238-016-11 1-238-016-11 1-238-017-11	RES, ADJ, CARBON 10K (PB LEVEL R-CH) RES, ADJ, CARBON 10K (REC LEVEL R-CH) RES, ADJ, CARBON 22K (BIAS R-CH)
RV 501 RV 502 RV 801	1-238-905-11 1-238-904-11 1-238-019-11	RES, VAR, CARBON 50K/50K/20K(REC LEVEL) RES, VAR, CARBON 50K/50K (BALANCE) -RES, ADJ, CARBON 47K (QUICK REV)
RY801	1-515-683-11	RELAY
S501 S502 S701	1-572-154-11 1-571-305-11 1-571-305-11	SWITCH, ROTARY (DOLBY NR) SWITCH, PUSH (1 KEY)(MPX FILTER) SWITCH, PUSH (1 KEY)(POWER)
\$801 \$802 \$901	1-571-520-11 1-571-520-11 1-554-303-21	SWITCH, SLIDE (DIRECTION MODE) SWITCH, SLIDE (TIMER) SWITCH, KEY BOARD (OPEN/CLOSE)
S902 S903 S904	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (■ ) SWITCH, KEY BOARD (◄ ) SWITCH, KEY BOARD (▶ )
S905 S906 S907	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (REC) SWITCH, KEY BOARD (►) SWITCH, KEY BOARD (◀)
S908 S909 S910	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (REC MUTE) SWITCH, KEY BOARD (PAUSE) SWITCH, KEY BOARD (DISPLAY MODE)
S911 S912 S913	1-554-303-21 1-554-303-21 1-554-303-21	SWITCH, KEY BOARD (AUTO REC LEVEL) SWITCH, KEY BOARD (FADER) SWITCH, KEY BOARD (COUNTER:RESET)
S914 S1001 S1002	1-554-303-21 1-466-237-11 1-570-953-11	SWITCH, KEY BOARD (COUNTER:MEMORY) ENCODER, ROTARY SWITCH, PUSH (1 KEY)(DOOR)
\$1003 \$1004 \$1005	1-571-958-11 1-572-126-11 1-572-125-11	SWITCH, PUSH (1 KEY)(CLOSE) SWITCH, PUSH (1 KEY)(OPEN) SWITCH, LEAF (FWD)
\$1006 \$1007 \$1008 \$1009	1-572-202-11 1-572-125-11 1-572-125-11 1-572-125-11	SWITCH, LEAF (HALF) SWITCH, LEAF (METAL) SWITCH, LEAF (70US) SWITCH, LEAF (REV)

Ref.No.	Part No.	Description
T101 T301 T501	1-433-335-11 1-433-335-11 1-433-336-11	TRANSFORMER, BIAS OSCILLATION TRANSFORMER, BIAS OSCILLATION TRANSFORMER, BIAS OSCILLATION
TB1001	*1-569-066-11	PIN, CONNECTOR 5P
TP801 TP802	*1-564-506-11 *1-564-505-11 *1-564-505-11 *1-564-506-11	PLUG, CONNECTOR 3P PLUG, CONNECTOR 2P PLUG, CONNECTOR 2P PLUG, CONNECTOR 3P
X801 X901	1-577-358-21 1-577-360-11	VIBRATOR, CERAMIC (4MHz) VIBRATOR, CERAMIC (6MHz)

## ACCESSORY & PACKING MATERIAL

1-559-533-11	CORD, CONNECTION
*3-350-829-11 *3-350-829-21	(AEP)INDIVIDUAL CARTON
*3-350-830-01 3-703-450-01	CUSHION (US)INSTRUCTION
3-751-465-11 3-751-465-21 3-751-465-31 3-751-465-41	(AEP)MANUAL, INSTRUCTION (US,Canadian)MANUAL, INSTRUCTION (Canadian)MANUAL, INSTRUCTION (AEP,Canadian)MANUAL, INSTRUCTION